Fisheries Policy-Making

production and Use of Knowledge

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ISSUES RELEVANT TO THE EUROPEAN LEVEL

Chapter 8

Fisheries Policy-Making: Production and Use of Knowledge

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8.1 INTRODUCTION

The institutional set-up for production and use of knowledge in relation to fisheries management in Europe is complex and involves a number of actors. The two most prominent actors in the system are the International Council for the Exploration of the Sea (ICES) and the European Union (EU, Union). ICES is the intergovernmental agency that—as the centre of a system that provides management advice based on biological scientific knowledge—coordinates marine research activities in the North Atlantic. The EU is the main consumer/user of this scientific knowledge as a part of its decision-making process relating to the management framework and instruments of the Common Fisheries Policy (CFP). The CFP is arguably one of the most science-dependent common policies in the portfolio of the EU.

The CFP is currently undergoing reform and a major step of the ongoing process was taken with the adoption of a new basic regulatory framework, which entered into force 1 January 2003 [1]. The present and ongoing reform of the CFP is closely linked to the fact that EU fisheries management has fallen short of delivering the desired results of fisheries management since the first basic regulation for a common fisheries policy was agreed upon in 1983. A large number of fish stocks are currently outside what have been defined as safe biological limits; and much of the catching industry is in a permanent state of crisis, due to continuing overcapacity and low quotas. This is described in the Commission's Green Paper—a comprehensive preparatory document relating to the reform process [2]. The precarious situation of the cod stocks and the commercial whitefish sector in the North Sea has in recent years manifested itself as the prime example of this crisis.

Attempts at reforming the system that provides scientific and technical advice to the Union is also high on the agenda, and, in 2003, the Commission published a Communication on the issue [3]. Deficiencies relating to fisheries science and the provision of advice have, from various sides, including from outside the Commission, been identified to be contributing to the CFP's problems [4].

This chapter provides a basic introduction to the present decision-making system, how scientific knowledge and other types of knowledge feed into it, the problems inherent in

the system and the contours of the reform of the system that delivers scientific advice and other types of knowledge.

8.2 THE ICES–EU SYSTEM

The CFP aims at the sustainable exploitation and equitable distribution of a resource that is constantly changing in complex ways in response to human exploitation as well as to natural factors. The setup of the present system means that the EU is in perpetual need of accurate assessments of the state of the fish stocks in order to apply the appropriate management measures. The CFP's basic regulation states that the decision-making process shall be "*based on sound scientific advice which delivers timely results*" [1]. The biological element of this scientific advice is delivered mainly by ICES but the Union is also obliged to seek information and input from other sources. This follows from a requirement to involve stakeholders at all stages of policy-making [1].

The process that transforms ICES' scientifically-based advice, and other inputs of knowledge into EU fisheries management measures, is not static or uniform. It is hardly possible to arrive at an objective answer as to what input is appropriate in relation to a specific measure. The discussion of the balance between inputs from different stakeholders in relation to the CFP's decision-making process has consequently been one of the main issues of controversy of the present reform of the system. Biologically based scientific advice might be interpreted as pivotal in some cases—for example, on the question of total allowable catches (TACs); and equally insignificant in other cases—for example, on questions of compensation, where economic information is more relevant. The interpretation will to a large extent depend on who is asked. As a result of this, the actors involved in providing the knowledge base vary from measure to measure and over time.

The formal decision-making process of the EU varies also depending on the issue in question. Whereas some degree of involvement of the Commission and the Council is usually given, the involvement of the Parliament and various committees varies. Figure 8.1 provides a schematic overview of the advice and management system, with a focus on ICES and the EU.

8.2.1 International Council for the Exploration of the Sea

ICES delivers scientific advice on fisheries management to the EU, among other clients. The EU is ICES' largest client and ICES is likewise the most prominent provider of scientific advice to the EU in the area of fisheries. ICES provides advice on fish stocks in the North-East Atlantic, where some of the Union's most important fisheries takes place. ICES' assessments are based on both data from commercial fishing vessels (fisheries-dependent data) and data collected through other means, for instance trawl surveys conducted by research vessels (fisheries-independent data).

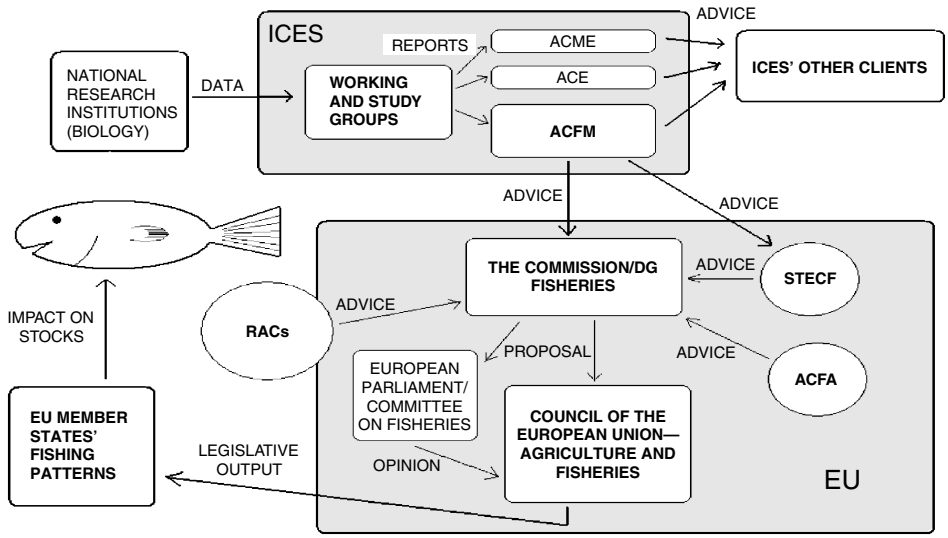

Fig. 8.1. Advice and Management—ICES and EU

ICES has 19 member states[1], and can be understood as a forum where the national laboratories of the ICES member states pool their resources. The basic unit of the ICES system is the individual scientists, who are employed in the different national laboratories and institutes of the ICES member states. The network consists of approximately 1600 marine scientists, mainly biologists. The national fisheries institutes are funded by the member states, but, specifically in relation to the EU member states, the Commission funds an increasing amount of activities within the national institutes. It is, however, questionable how much this increasing contribution actually increases the overall budgets of the institutes seen in the light of national budget cuts. ICES' own budget does not cover more than coordination activities and it is therefore of crucial importance to ICES that the national institutes have sufficient funding. The work, which is necessary for ICES to carry out its tasks, is coordinated through a system of committees and working/study groups. Some of the groups are maintained in cooperation with other international fisheries organisations.

There are more than 100 working/study groups dedicated to different themes covering all aspects of the marine ecosystem. Many of these are charged with specific species or specific areas; others relate to methods or other issues such as by-catch. The members of these groups are nationally appointed experts from the member states' fisheries institutes and universities, etc. These working groups submit reports to either: the Advisory Committee on Fishery Management (ACFM), which advises on the state of living marine

[1] The ICES member states are Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Latvia, the Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, the United Kingdom, and the United States of America.

resources; the Advisory Committee on the Marine Environment (ACME), which advises on issues such as marine pollution; or the Advisory Committee on Ecosystems (ACE), which advises on ecosystem dynamics.

These are the three committees responsible for delivering advice to the clients. Besides this the Committees are charged with overseeing the work of a number of working/study groups where the basis for the advice is developed. The advice is—after having been compiled and reviewed by the relevant advisory committee—forwarded to the client. The EU receives the advice from the ACFM, and it is on this advice that proposed TACs for the key commercial species are based. That the EU is, in economic terms, ICES' largest client means that this relationship is particularly important to ICES. As a result, the organisation has been responsive to the wishes of the EU (see section 8.4).

8.2.2 European Union

The main actors in relation to the direct formulation of the Common Fisheries Policy—and therefore also the main consumers of knowledge—are the European Commission's Directorate-General for Fisheries and Maritime Affairs (DG Fisheries) and the legislating body of the EU's Agriculture and Fisheries Council, where the Member States are each represented by their Minister responsible for fisheries. A less prominent role is played by the European Parliament (EP) and its Committee for Fisheries, which has, if nothing else is stated, the right to be heard on matters relating to the CFP. The Court of Justice of the European Communities will not be dealt with in this context, as it does not play an active part in the decision-making process. It should, however, not be forgotten that some of its rulings have influenced EU fisheries management significantly by clarifying the valid interpretation of EU legislation.

The corner stone of the CFP's conservation policy is limitation of catches by the setting of annual TACs for single species in defined geographical areas (the ICES-areas). TACs are set for most of the commercially important species. The TACs are subsequently distributed in predetermined shares between the Member States, which, in essence, means that a Member State's national allocation can only increase if the overall TAC increases. This core principle is called 'relative stability'. The quota shares were originally calculated on the basis of a combination of (1) historic catches; (2) special provisions for coastal communities, which were heavily dependent on fishing; and (3) compensation for jurisdictional losses in catches in the waters of third countries, which resulted from the establishment of 200 nautical mile exclusive economic zones (EEZ) in the mid-1970s [5]. The other core principle of the CFP is 'equal access', which means that the combined sea area of the member states' EEZs is treated as a common European sea area (sometimes referred to as the 'Community pond'), although with special conditions applying within the 12 nm limit. The TAC system has traditionally been supplemented by a variety of technical measures, which are directed mainly at preventing the (by-)catching of juvenile fish or non-target species. Technical measures include provisions for minimum mesh sizes, minimum landing sizes, rules as to what fishing gear can be used and where, seasonal bans on fishing, limitations on days-at-sea for vessels, etc. In connection with the application of the reformed CFP from 1 January 2003, renewed focus has been put on

the limitation of fishing effort as a way to limit pressure on stocks—particularly within the framework of multi-annual recovery or management plans [1].

Whereas the conservation component of the CFP is highly dependent on biological advice concerning stock levels, this is not the case, to the same extent, for other components of the CFP. Biological advice is not generally considered in the decision-making process relating to the structural policy of which the main instrument is the Financial Instrument for Fisheries Guidance (FIFG). This relative lack of attention to biological knowledge is to some extent paradoxical since this component of the CFP has traditionally had an immense impact on the fishing industry and, indirectly, also on the state of the stocks. This is because the CFP's structural policy has until recently, at least in part, contributed to the development of overcapacity in the European fleet: overcapacity has been identified as one of the main issues to address in order to achieve sustainable fisheries. This exclusion of biological knowledge has contributed to a relative detachment between the conservation component and other components of the CFP, meaning that different parts of the CFP have, in reality, been pulling (partly) in different directions. In the same way, it could be argued that there should be more focus on socio-economics within the advice related to the conservation component of the policy, since this is basically about managing fisheries, rather than fish. These issues are to some extent taken into consideration by the ongoing reform of the CFP.

8.2.2.1 The Commission / DG Fisheries

Advice from ICES is, in the first instance, received by DG Fisheries. The tasks of this division of the European Commission are to develop and propose measures to advance the objectives of the Union; and to implement those measures under the executive powers delegated to it by the Council [6]. To be able to perform these tasks smoothly and efficiently, an appropriate knowledge base is of pivotal importance. But, as mentioned earlier, the sources of appropriate knowledge depend upon the issue in question and the point-of-view of those seeking the knowledge. DG Fisheries officials perceive, according to Lequesne [7], themselves as guardians of expertise, especially biological expertise, as opposed to governments, which are vulnerable to lobbying efforts from the industry.

The Commissioners are supposed to act on behalf of the Community, and it is, therefore, a legal requirement that they remain independent and not take instructions from either governments or other bodies. In practice, Member States actively try to place their Commissioner in charge of their preferred portfolio and the requirement for independence and neutrality is interpreted with some degree of flexibility [8]. Commissioners are, from time to time, accused of taking instructions from and blatantly protecting the interests of the Member State from which they come. This is generally not considered acceptable.[2]

[2] An incident during the reform year of 2002 is a good example of the, at times, less than neutral position of Commissioners. On national television, the Spanish Fisheries Minister, Miguel Aries Cañete, declared on 25 April that Spain and other Member States opposing the reform (as it was outlined at the time) had *instructed* their Commissioners to obstruct the reform. The Spanish Minister later withdrew his statements and Spain suffered no formal consequences for the affair. However, the affair received substantial negative publicity, which shows that there are limits to the flexibility of the interpretation of neutrality. This political attempt to use Commissioners to obstruct a European policy was clearly considered out of line.

The Commission has the right to propose new legislation in the area of fisheries policy, as in most EU policy areas. It is DG Fisheries that annually drafts proposals for the TACs for the following year. These proposals are usually ready by the beginning of December. As a part of their preparation, DG Fisheries acquires knowledge from various sources. Their in-house scientific capacity is very limited and counts only nine persons as of April 2002. Thus, scientific knowledge must be provided from outside the organisation [3]. The sources of scientific knowledge, and knowledge in a broader sense, include, besides ICES and other international organisations, several committees or committee-like structures. In connection with the setting of TACs the Scientific, Technical and Economic Committee for Fisheries (STECF) is of particular importance.

Other sources of knowledge input can also be included in the process but this will more often be in relation to more fundamental framework decisions like the new basic regulation. On a number of occasions the Commission has engaged in dialogue with stakeholders through the use of public hearings, where concerned interests are encouraged to give their input. In its most simple form stakeholder involvement entails inviting opinions through DG Fisheries' website. However, in relation to the preparation of the Green Paper on reform, the consultation process involved elements such as sending out questionnaires to 350 groups with an interest in fisheries, a large number of regional meetings in the various Member States, and a concluding conference attended by 400 people in Brussels. In addition, the EU, represented by the Commission, funds a large number of different research projects through its research framework programmes: the sixth and current programme runs from 2002 to 2006. This publication is funded under priority 8 of the Sixth Framework Programme—Integrating and strengthening the European Research Area: Policy-Oriented Research. The ability of the Commission to formulate programme areas, thematic priorities and calls for proposals, which eventually result in research results, enables it to guide the European research agenda according to its needs. Although the Commission cannot determine the results of such research, it can, to some extent, decide upon its' focus. Furthermore, Member States are legally required to obtain and provide certain information on biology, economy and social issues relating to fisheries.

The datasets, which the Member States are (or in coming years will be) legally required to collect and provide, are outlined in a body of regulations. The Council's basic framework regulation on collection and management of data states that "[t]*o conduct the scientific evaluations needed for the common fisheries policy* [. . .]*, complete data must be collected on the biology of the fish stocks, on the fleets and their activities and on economic and social issues*" [9]. The consequences of this, in terms of specific data requirements and confidence levels, are subsequently outlined in detail in a Commission regulation (as amended by a later regulation [10]), which groups data in three modules: (1) module of evaluation of inputs: fishing capacities and fishing effort; (2) module of evaluation and of sampling of catches and landings; and (3) module of evaluation of the economic situation of the sector [11]. The fact that the plans for data gathering are national responsibilities, while fisheries resources are shared, is a problem. The Commission is now, therefore, setting up coordination meetings to facilitate cooperation in this matter.

The progressive implementation and adaptation of this regulatory framework[3] strengthens the knowledge base for EU fisheries management by contributing to the improvement of the data, which policy-makers, experts and stakeholders rely on in relation to the CFP's decision-making process.

When DG Fisheries has received the required information from the relevant sources, including input from other relevant DGs, the responsible directorate[4] in DG Fisheries finishes drafting the proposal, which is then passed upwards through a number of stages. The final internal destination of any Commission draft proposal is the 'College of Commissioners', which can accept the proposal, reject it, refer it back for re-drafting or decide not to take any decision whatsoever. The College of Commissioners consists presently of one Commissioner from each of the 25 member states and takes decisions by simple majority through secret voting.

The proposal from DG Fisheries (and eventually the Commission) on TACs is often relatively similar to that recommended by STECF/ICES. However, this is not always the case. The Commission is not only concerned with long-term biological sustainability of fish stocks, but also takes into consideration both the short and longer-term socio-economic costs of TAC-related decisions. The step from STECF to the Commission—or perhaps especially from DG Fisheries to the College of Commissioners—constitutes a step away from almost purely biological scientific considerations and towards a phase where politics and other objectives are increasingly taken into consideration. Consequently, the proposal on TACs, which passes from the Commission to the Council, often involves higher TACs than those that would follow from the scientists' biological advice, even though DG Fisheries perceives itself, to a considerable extent, to be the guardian of exactly that.

Central to the system that provides knowledge from within the EU system stand a number of committees with varying responsibilities and relationships with DG Fisheries.

Scientific, Technical and Economic Committee for Fisheries

The most important committee in relation to scientific advice is the Scientific, Technical and Economic Committee for Fisheries (STECF). This Committee is provided for by the basic regulation, which states that the Committee "*shall be consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations*" [1]. This advisory expert Committee consists of 30 to 35 scientists, mainly from the fields of marine biology, marine ecology, fisheries science, nature conservation, population dynamics, statistics, fishing gear technology, aquaculture, and the economics of fisheries and aquaculture, who are appointed for a renewable period of three years [12]. The Committee (under its former name—the Scientific and Technical Committee for Fisheries)

[3] Scoreboards and guidelines are also connected to the body of regulations. These are intended to improve the provision of data from the Member States and to increase its uniformity.

[4] DG Fisheries consists—as of April 2005—of 5 directorates relating to different aspects of the CFP namely: conservation policy, external policy and markets, structural policy, control and enforcement, and, finally, resources and relations with stakeholders. See DG Fisheries organigramme: http://europa.eu.int/comm/dgs/fisheries/organi/oganig_en.pdf [Accessed 15 April 2005].

was provided for by the first basic regulation of the CFP from 1983; it was not until 1993 that the Committee composition was altered to include economists [5].

STECF meets in plenary twice a year and advises DG Fisheries on matters where scientific skills are central. This advisory Committee can, in collaboration with DG Fisheries, form internal sub-groups/working groups, which, in some cases, include experts from outside the STECF and even the EU Member States [3]. STECF has some latitude with regard to the advice it produces as it can, by its own accord, draw attention to the same matters on which it is regularly consulted [12]. STECF relies, to a large extent, on the same expertise as ICES, namely that emanating from the national fisheries laboratories. This means that there is a considerable overlap between members of the STECF, including its subgroups, and the various ICES groups and committees. This leads, according to the Commission, to repetitive work for some experts [3].

STECF bases the advice on TACs and other issues, which it gives to DG Fisheries, predominantly on the findings produced by ICES, but also on those of other scientific advisory organisations (particularly regional organisations, which will be dealt with later in this chapter). STECF is, in other words, consulted to review the yearly scientific advice from ACFM, as well as other advice coming from ICES or other sources. The advice that STECF submits to DG Fisheries rarely differs substantially from that of the original from ICES. However, STECF adds to the knowledge base around the advice by conducting evaluations for selected fleets of the potential short and long-term economic impacts (carried out by the Subgroup on Economic Assessment (SGECA)). STECF is the only source of economic advice DG Fisheries consults on a regular basis. As far as DG Fisheries are concerned, such economic advice is an increasingly important aspect of STECF's work. STECF does little original scientific work; rather the committee compiles desk studies and reviews the work of others. Whenever original scientific work is carried out, this most often takes place in working groups convened by DG Fisheries to address specific issues [3]: for example, mixed fisheries.

However, regardless of the fact that there is a wide overlap between the experts involved in STECF and its working groups and those involved in the ICES system, the fact remains that these experts—when involved in STECF—are working in context other than ICES. STECF scientists work directly for the Commission. As a consequence, STECF tends to be able to provide advice on issues, and in a manner, which ICES is not—even on issues within its area of expertise. Part of the reason for this is that the same scientists accept different approaches, depending on whether they are working within or outside the ICES system. Within STECF the scientists are free to act more as consultants responding to whatever is required from the customer, DG Fisheries, without having to consider to the extent that ICES does if the requests are reasonable or if answers can be misused.

When the advice from ICES has been through STECF it has gained status in relation to the basic regulation of the CFP, which states that the Commission must take into consideration the opinion of STECF [1]. The regulation has no reference to ICES—or any other external organisation, for that matter. However, the Commission is not obliged to follow the recommendations of STECF and consults others before submitting its proposal to the Council. Two other sources of information are particularly relevant

besides STECF: the Regional Advisory Councils (RACs) and the Advisory Committee on Fisheries and Aquaculture (ACFA).

Regional Advisory Councils

The agreement on the legal provision for Regional Advisory Councils (RAC) is one of the most visible results of the recent reform of the CFP in terms of changes in the institutional setup. A recurring critique of the CFP in its more recent years has been its failure to include the knowledge and opinions of, in particular, local and regional stakeholders in the CFP's management and decision-making process—neither to a sufficient degree nor early enough within that process. This was specifically recognised by the Commission in its Green Paper on reform of the CFP [2]. The provision for RACs responded to this critique as they will function as stakeholder-led advisory forums and will include actors who had, thus far, not had any direct, formal role in the management procedure. It is hoped that including the fishing industry (and other stakeholders) more in the management process will lead to both better decisions, which are less in conflict with reality as experienced by stakeholders, and a higher degree of compliance, due to a feeling of ownership of the agreed rules. In the context of the role of science and scientists, an additional aim of setting up RACs has been to facilitate cooperation and discussion between scientists and fishermen on issues such as data collection and management advice.

In legal terms, the RACs have a purely advisory role *vis-à-vis* the Commission and DG Fisheries. However, DG Fisheries has indicated that the opinions of the new RACs will weigh heavily in the decision-making process in so far as they do not turn out to reflect the lowest common denominator of the fishing industry (interview with high-ranking employee in DG Fisheries, November 2003). How this will work out in practice is one of the main 'unknowns' surrounding the RACs. It is also not yet clear in which cases the RACs will be consulted. In the legal texts it states that the RACs should give recommendations to the Commission or national authorities of the concerned Member States on fisheries aspects in the areas they cover. They are authorised to submit recommendations on request from the Commission or national authorities, as well as on their own initiative [1]. The RACs are, in terms of institutional set-up, placed between the Commission and the concerned Member States.

A RAC consists of a General Assembly and an Executive Committee—the latter being of no more than 24 members. In both of these fora, two-thirds of the seats are occupied by the fisheries sector; and the catching subsector of each concerned Member State should have at least one place in the Executive Committee. The last third of the seats are allotted to other interest groups [13]. The fisheries sector is defined as "*the catching sub-sector, including shipowners, small-scale fishermen, employed fishermen, producer organisations as well as, amongst others, processors, traders and other market organisations and women's networks*". The category 'other interest groups' includes "*amongst others, environmental organisations and groups, aquaculture producers, consumers and recreational or sport fishermen*" [13]. Besides these stakeholders, which can act as members, others can be involved in the RACs as experts—namely scientists—or active observers—namely a Commission representative, national administrations' representatives, a representative of the Advisory Committee for Fisheries and Aquaculture (see next section), or various representatives from third countries. The Executive Committee adopts recommendations,

as far as possible, by consensus. However, if consensus cannot be reached, decisions are taken by a majority of present and voting members. If there are dissenting opinions these shall be recorded in the recommendations [13].

Seven RACs are proposed in the framework-decision, one for each of the following areas/fisheries: the Baltic Sea, the Mediterranean Sea, the North Sea, north-western waters, south-western waters, pelagic stocks, and the high seas/long distance fleet [13]. The chosen areas are indicative of a compromise between a wish to base the management units on biogeographical criteria (large-scale eco-system or fisheries for certain groups of species) and, at the same time, limit their number. RACs for each of these areas/fisheries will be set up on the initiative of stakeholders through the Member States in question [13]. The RAC for the North Sea (NSRAC), which has been operational as from 1 November 2004, was the first to be established [14]. Furthermore, at the time of writing (November 2005) the North-Western Waters RAC and the Pelagic Stocks RAC have been declared operational by the EU.

The RACs' establishment has contributed to and reinforced a number of discussions, which have evolved around the failings and shortcomings of the CFP. One issue has been the discussion between those advocating a more regional approach to European fisheries management and those who fear that a move in that direction could be a step towards renationalisation of fisheries management. Connected to this is the discussion of whether or not the RACs should have been given real decision-making capabilities. For example, it could be argued that real ownership will only be felt if the recommendations are actually put to use in a more or less unchanged format. A third discussion has evolved around the issue of who can be considered legitimate fisheries stakeholders and what the balance should be between them—a discussion which is, of course, also connected to the other discussions: how different stakeholders conceive and envisage the role of the RACs is closely related to their influence within them.

Advisory Committee on Fisheries and Aquaculture

DG Fisheries will also, in most cases, consult the Advisory Committee on Fisheries and Aquaculture (ACFA), which was set up by the Commission in 1971, in order to be able to take European-level—as opposed to regional in the RACs—stakeholder groups' opinions into consideration in matters relating to the tasks of the Commission within the area of fisheries [7]. For this purpose, the Committee is authorised to issue opinions and resolutions on various issues and proposals from the Commission [15]. The output of ACFA contributes to the Commission's knowledge base by providing stakeholder views and information on a broad range of issues. However, ACFA has, according to Lequesne, had relatively little influence on Commission proposals: rather, "[t]*he core raison d'être of the Consultative Committee* [ACFA] *has been an exercise in mutual legitimization*" [7].

ACFA, which is organised with four working groups under it, was restructured in 1999 and to a much lesser extent in 2004 to take into account the growing importance of aquaculture in the European fisheries sector [16]. Originally, ACFA's central plenary committee's members mainly represented groups with an economic stake in the CFP. However, the 1999 reform brought a wider spectrum of stakeholders into ACFA, which means that the plenary committee now includes representatives of the following

interests: private ship-owners, cooperative ship-owners, employed fishermen, producer organisations, stock-breeders of fish, mollusc/shellfish stock-breeders, processors, traders, consumers, environmentalists, and development organisations [15]. ACFA continues, however, to be numerically dominated by representatives of the fishing industry.

ACFA's four working groups, which prepare the opinions of ACFA, are: (1) Access to fisheries resources and management of fishing activities, (2) Aquaculture: fish, shellfish and molluscs, (3) Markets and Trade Policy and, finally, (4) General questions: economics and sector analysis. Each working group has a fixed number of members ranging from 15 to 19 allocated from the different groups of stakeholders. The Commission can appoint additional members according to items on the agenda. In the working groups other interests/groups besides those represented in the plenary committee are included. These interests are banks (working groups 3 and 4), auctions and ports (working group 3), biology (working groups 1 and 2) and economy (all working groups). The representatives from biology and economics are appointed by the Scientific, Technical and Economic Committee for Fisheries [15].

8.2.2.2 European Parliament

In many cases the next step of the decision-making process is a hearing of the European Parliament. This elected body presently consists of 732 parliamentarians from the 25 Member States. However, it is important to note that the vital TAC regulation does not pass through the European Parliament. This follows from the provisions of the basic regulation [1]. As this indicates, the formal power of the European Parliament over EU fisheries legislation is, in general, limited. The consultation procedure, which presently covers fisheries policy whenever no other provision or specification is made, ascribes the weakest possible role (besides no role at all) to the Parliament [7].

The consultation procedure requires that the views of the Parliament must be heard before the Council decides on whether to adopt a proposal on fisheries legislation and in which form. When the Commission proposes new legislation in the area of fisheries the Parliament will be asked to propose amendments to it. Most of the work on the Parliament's resolutions, which contain the amendments, is done in the standing Committee for Fisheries. The Committee for Fisheries adopts by simple majority a report as a proposal for a resolution. The resolution is hereafter dealt with in a full Parliamentary plenary session, where each proposed amendment has to gather a majority of the votes of those Members of the European Parliament (MEPs) who are present. If the Commission agrees with, or at least does not oppose, the Parliament's amendments, it can change its position accordingly before negotiations in the Council. The Council is, however, not required to follow the Parliament's opinion. From time to time, the Council has actually made a 'political agreement' before the Parliament had delivered its opinion. In cases like these, the Parliament's resolution is effectively reduced to a 'rubber stamp' (interview with member of the Committee for Fisheries, November 2003).

One way the European Parliament's Committee for Fisheries and other interested parliamentarians (in the area of fisheries not that many) acquire knowledge about the fisheries issues, which it deals with, is through hearings where representatives of industry, academia, authorities, NGOs etc., are invited. Besides these hearings, MEPs can, of

course, also draw on many of the same sources of information as the Commission, even though they do not have the same access to request opinions on issues of their own choice. Importantly, the Committee for Fisheries is according to Lequesne "*the sole EU institution, which uses its reports and hearings to bring alternative expertise to bear on the proposals of DG XIV* [DG Fisheries]" and "*its deliberate cultivation of expertise as the basis of its efforts to influence the Commission*" is striking [7]. NGOs, and to some extent the fishing industry, both of which have traditionally felt deprived of a reasonable representation in relation to EU fisheries management issues, have also utilised the Parliament as a way to gain access to the decision-making system of the EU by lobbying MEPs, who have felt it beneficial to be associated with those interests. However, lobbying efforts have logically been more intense in areas where the Parliament has greater formal influence, such as on environmental policy. It follows from this that the Parliament could potentially become more influential as fisheries issues are increasingly integrated with environmental policy and efforts are made to introduce environmental concerns into the CFP [17].

8.2.2.3 The Council of the European Union

In the Council of the European Union the Member States are each represented by their Ministers responsible for fisheries issues. It is this body which takes the final decision on adopting new legislation. Such decisions include the high-profile setting of TACs, which takes place at the end of December on an annual basis. Fisheries policy, in contrast to many other policy-areas, is dominated by political intervention through 'regulations'. Regulations are directly binding in the Member States and do not need national legislation to be legally applicable. Fisheries policy is consequently one of the areas where the Council has the most wide-ranging powers, which "*virtually amount to direct administration*" according to Lequesne [7].

Most fisheries legislation is adopted under qualified majority voting (QMV) where each Member State has a fixed number of votes. The largest Member States have the most votes, but smaller Member States have relatively more votes than the mere size of their populations justifies.[5] In consequence, how often a Member State will be in the 'pivotal' position to determine whether an act relating to fisheries is adopted or not, depends on its size and on coalition patterns within the Council. All coalitions are not equally likely to form. The pattern depends on the conflicts of interests in the policy area and the political positions of the governments involved in the negotiations. These two issues can hardly be separated since perceptions of interests will (to some extent) depend on the political positions of governments [18].

Proposals go through a thorough examination at lower levels of the Council before they are adopted (or rejected) by the Ministers. In the case of fisheries, the examination of a proposal starts in the relevant working group of which there are two: the External Fisheries

[5] A qualified majority is reached when the following conditions are achieved: 1) a simple majority of the 25 member states are in favour, 2) the votes they represent constitute at least 232 of the total of 321, and 3) they represent at least 62% of the total population of the EU. See European Union website on the Council: http://europa.eu.int/institutions/council/index_en.htm [Accessed 15 January 2006].

Working Group/Working Party on External Fisheries Policy, dealing with relations with third countries, and the Internal Fisheries Working Group/Working Party on Internal Fisheries Policy, dealing with conservation, markets and structures within the EU.[6] These working groups consist of civil servants representing the Member States. Already at the working group stage, the Commission may consider amending its proposal if there is opposition. When the working groups have completed their work the proposal is passed on upwards in the Council hierarchy to the higher ranking civil servants in the Permanent Representatives Committee (Coreper), which, unlike the lower level working groups, has the authority to decide on questions of a more contentious nature. The Fisheries Ministers will finally deal with the proposals, which cannot be agreed at lower levels. This is always the case for the highly political issue of agreeing on TACs.

Uncertainties in the basis of the scientific advice underlying the Commission's proposals may be an important element of Council negotiations, since they, to some extent, provide Member States with an opening for questioning, and subsequently revising, proposals, without overtly disputing 'sound scientific advice'. In this respect, it should be noted that one reason for politicians not to act on scientific advice which will have short or medium term negative socio-economic impacts, is the fact that politicians' time perspectives often do not stretch much beyond the next election. Consequently, as long as decisive action is judged as likely to be less popular than less significant change, the latter option will be chosen. Where the balance between these options is found is, however, not static. Additionally, there are arguably other explanations for the failure of the Council of Ministers to act upon scientific evidence. For example, efforts by lobby groups might be successful in calling the validity of the scientific advice into question.

8.3 REGIONAL FISHERIES MANAGEMENT ORGANISATIONS

The EU is a contracting party in ten[7] regional fisheries management organisations (RFMOs), which have been set up to monitor and regulate fisheries activities in international waters. The RFMOs can be divided into two groups: those that are primarily defined by the species they deal with and those that are primarily defined by the area they

[6] On occasion a Working Party of Directors of Fisheries Departments meets to discuss issues relating to fisheries and provide guidance to the Commission and the fisheries working groups under the Council. See the website of the Swedish Presidency: http://www.eu2001.se/eu2001/calendar/meetinginfo.asp?iCalendarID=657 [Accessed 15 January 2006].

[7] The number could be argued to be eleven but the International Baltic Sea Fisheries Commission (IBFCM) is currently being dissolved and replaced by bilateral agreements between the EU and Russia. After the accession of Poland and the Baltic States, the EU and Russia are the only relevant members of IBSFC. The ten remaining RFMOs are: North-West Atlantic Fisheries Organisation (NAFO), North-East Atlantic Fisheries Convention (NEAFC), Indian Ocean Tuna Commission (IOTC), North Atlantic Salmon Conservation Organisation (NASCO), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), International Commission for the Conservation of Atlantic Tuna (ICCAT), General Fisheries Council for the Mediterranean (GFCM), Western Central Atlantic Fishery Commission (WECAFC), Fishery Committee for the Eastern Central Atlantic (CECAF), and South-East Atlantic Fisheries Organisation (SEAFO).

cover. The RFMOs are mandated to decide on management measures within their area of responsibility. This means that the decisions of the organisations are binding on the contracting Member States. The Commission negotiates on behalf of the concerned EU Member States (on issues of conservation of living marine resources) and only if it is not possible to get agreement within the RFMO can a contracting party—for example, the EU—legally decide on unilateral management measures. In some of the RFMOs in the North-East Atlantic, the negotiated decisions are based on ICES advice. Other RFMOs have their own scientific committees, on whose findings, their negotiations and decisions are based upon. However, in general, these scientific committees are heavily dependent on work carried out at the national level and at national expense.

On request, some of the RFMOs provide advice to the Union on fisheries issues within its area of competence. The amount of advice from RFMOs is, however, much smaller than that of ICES. Within the EU system, advice from RFMOs is treated in much the same way as advice received from ICES, which means that it is reviewed by STECF. In the following we shall look at three examples of RFMOs and the science relating to them.

8.3.1 North-West Atlantic Fisheries Organisation

The North-West Atlantic Fisheries Organisation (NAFO) is a geographically defined RFMO with 13 members, which covers most fisheries resources in its area. NAFO's Fisheries Commission decides on a number of management and control measures based on advice from the Scientific Council of the organisation, which also provides advice directly to the members upon request. The measures adopted by NAFO include, most notably, TACs and quotas for a number of species. The contracting Member States are obliged to provide the necessary information for NAFO to conduct its duties.

To be able to advise on management issues, NAFO's Scientific Council compiles and maintains statistics for the NAFO area. The Scientific Council also records, publishes and disseminates reports, information and materials pertaining to the fisheries of the area. The Scientific Council consists of assessment scientists from the national fisheries institutes of the Member States. Expenses for these are met by each Member State. NAFO cooperates, furthermore, with ICES on a joint shrimp stock assessment and two ICES/NAFO working groups: 'Harp and Hooded Seals' and 'Reproductive Potential'. The Scientific Council has established four standing committees on various issues [19].

8.3.2 International Commission for the Conservation of Atlantic Tuna

The International Commission for the Conservation of Atlantic Tuna (ICCAT) is one of several tuna commissions worldwide. In the case of ICCAT, the geographical remit relates to the Atlantic Ocean. ICCAT's decision-making body, the Commission, can adopt different types of management measures, such as TACs, effort control and closed areas. ICCAT's aim is to keep the concerned stocks at levels where maximum sustainable catches can be achieved. Recommendations and resolutions from ICCAT are drafted on the basis of scientific input from its Standing Committee on Research and Statistics (SCRS).

SCRS is charged with making sure that the Commission has access to up-to-date statistics on fisheries and biological information on stocks. SCRS will also carry out stock assessments. The research activities necessary for SCRS to be able to advise on stocks are generally carried out by scientists in the contracting Member States' national fisheries institutes or universities. Besides this, ICCAT has a number of scientific research programmes, which are used to help focus, coordinate and complement the national research activities. These programmes, which usually focus on improving biological knowledge or fishery data for particular species, are, in some cases, funded by ICCAT from within their own budget, and, in other cases, funded by contributions from individual signatories or other agencies [20].

8.3.3 General Fisheries Commission for the Mediterranean

The General Fisheries Commission for the Mediterranean (GFCM) is the RFMO that covers most species in the Mediterranean. The structure of the GFCM is, in many respects, similar to that of ICCAT and NAFO. The decision-making body of the GFCM bases its management measures upon scientific input from its Scientific Advisory Committee (SAC). However, the management measures in place in the Mediterranean Sea are in general considered to be weak as, although GFCM has agreed on technical measures—including minimum mesh sizes and gear-type restrictions—it has not been able to agree on TACs and quotas even though they are mandated to do so by the contracting parties.

GFCM's scientific committee, SAC, has several sub-committees and working groups under it. GFCM also has an aquaculture-equivalent to SAC, the Committee on Aquaculture (CAQ). As in the cases of NAFO and ICCAT, most of the scientific work is conducted at the national fisheries institutes of Member States. Participation in GFCM/SAC activities is, in general, paid for by the Member States as the budget of GFCM is not sufficient to cover the salaries of scientists. The reports of SAC are of interest to the EU, which has important interests in Mediterranean fisheries and SAC advice is utilised in respect to resources within the national fisheries zones within the Mediterranean area [21].

8.4 ELEMENTS OF REFORM

In the face of criticism of the CFP and its perceived management failure—partly ascribed to deficiencies in the advice system—several elements of the knowledge provision system are currently being discussed and to some extent undergoing reform. The reform attempts are related to the institutional setup, the forms of advice, and the communication of advice.

Daw and Gray [4] alongside others (e.g., [2, 22]) criticise fisheries science generally and ICES specifically for failing to involve fishermen more in the advisory process. Increased involvement of fishermen in scientific biological assessment work has been argued to be beneficial in at least two respects. First, scientific assessments would be more credible to the fishermen if they knew that their knowledge was taken into account. This could potentially help to rectify the problem of non-compliance with the present CFP. Second,

the assessment process would be able to deliver more precise results if it had the support and involvement of the fishermen. The reason for this is that one of the major unknown inaccuracies of the work stems from misreporting and illegal landings. Such inaccuracies decrease the trustworthiness of fisheries-dependent data. Fishermen are, furthermore, in day-to-day contact with the sea and occasionally in a position to be among the first to notice changes in the abundance of a fish species. It has, however, turned out to be a very difficult—but not impossible [23]—task to develop meaningful cooperation between fishermen and scientists. In many ways, these groups come from different worlds and, even when they do see eye-to-eye, incorporating fishermen's experience-based knowledge in management is institutionally challenging [24].

The issue of facilitating cooperation between fishermen and scientists has been high on the Commission's agenda [3]. One of the main objectives of the RACs was precisely to create forums where fishermen and scientists can cooperate and develop a mutual understanding—something which has hitherto been severely lacking. Consequently, the memorandum of understanding between ICES and the EU states specifically that ICES should make every effort to provide scientists to attend RAC-meetings in order to facilitate the dialogue between stakeholders [25]. However, no EU funds have been allocated for any (regional) scientific studies that the RACs might wish to initiate. Only "*travel and accommodation expenses of experts attending RAC meetings*" are eligible for funding [13].

The Commission has discussed other possible changes in the setup of the advisory system. In its Communication on improving the scientific advice, the Commission states that more resources are needed for the advisory system, as "*the overall need for scientific advice is likely to continue growing*" [3]. The system is already stretched beyond its capacity. In the long term, the Commission suggests two main ways of allocating the necessary additional resources. One option is to strengthen and reorganise ICES, which would then have to provide advice on a wider range of issues than today, including advice for fisheries outside its present area and advice on technical measures. The second option is to develop and strengthen the internal EU analytical and advisory capacity, possibly by creating a technical and scientific secretariat to the STECF or to create an institution modelled after the European Agencies [3], such as the European Environment Agency (EAA).

Regardless of whether the future institutional setup will turn out to be along the lines of either one of the two options above, changes in fisheries management approaches will necessarily change the form of advice needed. Poul Degnbol [26], Chairman of ACFM from 2003 to 2005, lists several categories of advice, which are at presently becoming increasingly necessary at the expense of the traditional single stock catch projections:

- *Advice relating to the implementation of the ecosystems approach.* This entails *inter alia* establishing ecological quality criteria.
- *Advice, which relates to long-term management*. An example could be advice relating to the multi-annual recovery and management plans of the EU.

- *Advice relating to effort (input) regulation* rather than TAC (output) regulation. This is also closely related to the adoption of EU multi-annual management or recovery plans, which in most cases involve effort regulation.
- *Advice relating to fisheries rather than single stocks.* Much of EU fishing is not suited for management by single species TACs because most demersal fisheries are mixed. Advice on mixed fisheries effects is therefore important.

The above mentioned issues are touched upon in the present memorandum of understanding between the EU and ICES. The memorandum states that ICES should move towards multi-annual advice in line with the provisions for multi-annual recovery and management plans as set out in the basic regulation of the CFP [25]. Fast-track advice, which is not mentioned above, cannot really be considered a new form of advice, rather a speedier way of providing advice. Access to fast-track advice is a high priority in the Commission. This type of advice is considered of vital importance when stock levels are low—as they presently are—and conservation measures are urgently required [3].

Finally, how scientific advice is communicated has also been under discussion and will probably undergo changes. Scientists have been accused of not being sufficiently transparent in their development and delivery of advice. This lack of transparency, which has been noted in several places [3, 4], undermines the credibility of the advice among stakeholders, who may very well feel that uncertainties and other important factors are kept hidden from them. ICES is, as a consequence, currently working to make its procedures and advice more transparent.

8.5 CONCLUSION

The system that provides scientific and technical advice to the decision-making process of the CFP is highly complex and dynamic. The system is currently undergoing reform and will most likely continue to evolve. Within the EU context, which has been the focus of this chapter, the reform efforts are elements of an overall reform of the CFP, which has been brought about by the critical state of many important fish stocks, as well as by the problematic situation of the industry. However, the reform of the advice system is also driven by global developments relating to changes in the perception of how to manage fisheries efficiently—for example, the change towards an eco-system approach to fisheries. It is difficult to predict the outcome of the present reform but it is clear that there will not be a lesser need for qualified scientific advice. Rather, new demands on advice relating to the eco-system approach might very well put more demands on an already overstretched system.

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